

Delaware Division of Air Quality

2014

Air Toxics Strategic Plan Year-end Status

– Summary Report –
(January through December 2014)



Delaware
Division of Air Quality
2014 Air Toxics Strategic Plan

The Air Toxics Strategic Plan (ATSP) is a five-year plan of activities to be undertaken by Division of Air Quality (DAQ) and its partners to reduce the risk of adverse health effects caused by the inhalation of air toxics. The 2014 - 2018 ATSP, finalized on December 23, 2013, was organized within the following components.

- 1. Implement appropriate actions to reduce the harm from exposure to air toxics**
- 2. Evaluate the effectiveness of the actions taken to reduce harm from exposure to air toxics**
- 3. Identify options for reducing air toxics in the environment**
- 4. Build a greater understanding of ambient air toxics in the environment**
- 5. Identify the potential harm from exposure to air toxics**
- 6. Gather information related to air toxics sources**
- 7. Continue to grow the ongoing program to address the risks from exposure to air toxics**
- 8. Enhance DAQ Air Toxics Resources**

ACRONYMS

7 DE Admin. Code	Title 7 of the Delaware Administrative Code
AERMOD	An EPA Dispersion Model
ATSP	Air Toxics Strategic Plan
BTEX	Benzene, Toluene, Ethyl benzene, & Xylenes
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality Improvement Program
DAQ	Division of Air Quality
DELJIS	Delaware Criminal Justice Information System
DNREC	Department of Natural Resources and Environmental Control
EPA	U. S. Environmental Protection Agency
GACT	Generally Available Control Technology
HAP/HAPs	Hazardous Air Pollutant(s), as defined in Section 112(b) of the 1990 Amendments to the Clean Air Act
I/M	Inspection and Maintenance
MACT	Maximum Achievable Control Technology
MARAMA	Mid-Atlantic Regional Air Management Association
NACAA	National Association of Clean Air Agencies
NESCAUM	Northeast States for Coordinated Air Use Management
PLUS	Preliminary Land Use Service
QA/QC	Quality Assurance and Quality Control
QOL	Quality of Life
TAC	WILMAPCO's Technical Advisory Committee
VOC	Volatile Organic Compound
WILMAPCO	Wilmington Area Planning Council

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

1. Implement appropriate actions to reduce the harm from exposure to air toxics

a. Key Accomplishments

- i. Completed the diesel engine replacement project on the Delaware Bay Launch Services' vessel on May 20 and submitted final report to the EPA on December 18.
- ii. Responded to five incidences of improperly disposed of asbestos containing waste; initiated and coordinated proper disposal.
- iii. Responded to 162 incidences of improperly managed projects involved with the disposal of asbestos containing waste; provided guidance to assure proper cleanup and disposal.
- iv. Incorporated the applicable MACT standard requirements into two Title V operating permits during their respective renewals on January 17 (Formosa) and April 2 (Calpine).
- v. Reviewed and approved, if appropriate, gasoline dispensing facility's Stage I and Stage II permit applications.
 1. Approved 15 construction permits for 10 facilities.
 2. Approved 27 operating permits for 18 facilities.
- vi. Took an enforcement action against a gasoline dispensing facility during this period for non-compliance with the vapor recovery requirements.
- vii. Responded to 452 requests during this period for open burning guidance and assistance.
- viii. Issued 100 notifications during this period approving requests to conduct open burning.
- ix. Implemented a reconnaissance process to identify unapproved open burning activities and executed 5 interventions using neighborhood watch programs and other reporting measures.
- x. Updated open burning information used by the Environmental Protection Officers to enforce the requirements of 7 DE Admin. Code 1113 and continued to provide regulatory interpretation to public inquiries on a case-by-case basis.
- xi. Completed inventory of waste incinerators and submitted a negative declaration to EPA on January 8, in lieu of submitting a State Plan applicable to commercial and industrial solid waste incineration units under 40 CFR Part 60 Subpart DDDD.
- xii. Conducted educational outreach programs on the proper removal and disposal of asbestos for the . . .
 1. Delaware Building Officials Association in Wilmington on February 25.
 2. Lower Delaware and Maryland Building Officials Association in Georgetown on May 15.
- xiii. Completed public outreach through the development and implementation of an air quality-themed educational program, including competitive activities, which targeted high school students who participated in the 2014 Envirothon on April 11.
- xiv. While working with the Air Quality Partnership on the character branding project to communicate an air quality message targeted to elementary school students during 1Q14 . . .
 1. The contractor completed the development of the "Tropo" character, his costume, and an air quality skit for the future performances.
 2. "Tropo" debuted at the Air Quality Awareness event at Rodney Square in Wilmington on April 22 and at the Dover Days event on May 3.

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

1. Implement appropriate actions to reduce the harm from exposure to air toxics

a. Key Accomplishments - Continued

- xv. Completed development of a new Division of Air Quality (DAQ) outreach program that featured DAQ's new Moveable Monitoring Platform, visits by "Tropo", and new educational materials and exhibits, which were incorporated into DNREC's exhibitions at the following venues:
 - 1. The Delaware State Fair in July and
 - 2. The Delaware's Coast Day event on October 5.
- xvi. Participated in the event program planning with WILMAPCO and Transportation & Climate Initiative (TCI) and attended the Delaware "Freight Management Summit" event on August 8.
- xvii. Completed an initial major reorganization and redesign of the DAQ's web sites, which included air toxics, mobile sources, stationary sources, and area sources. (Updating and maintenance of the web sites is ongoing)
- xviii. Updated DAQ's Air Toxics Strategic Plan (ATSP) web site to provide the public with information on the . . .
 - 1. Year-end reporting of 2013 achievements and ongoing activities on March 17.
 - 2. Mid-year reporting of on activities under the 2014 ATSP on September 19.
- xix. Provided pertinent information (i.e. regulatory, permitting, compliance assistance, costs, etc.) for businesses associated with asbestos demolition and renovation activities through DNREC's Small Business Assistance Program (tier 1) website.
<http://www.dnrec.delaware.gov/SBA/Pages/Default.aspx>
- xx. Provided reporting and other compliance assistance tools on February 5 to assist in the permitting of an area source spray-coating operation subject to Section 14 of 7 DE Admin. Code 1138.

b. Significant Current Activities

- i. Began to incorporate auto-body repair shop requirements of Sections 13 and 15 of 7 DE Admin. Code 1138 into three operating permits for one new facility and two newly identified existing facilities. (Est. completion – 2015)
- ii. Began to incorporate perchloroethylene dry cleaning requirements of Section 5 of 7 DE Admin. Code 1138 into an operating permit for one new facility. (Est. completion – 2015)
- iii. Continued to provide assistance consistent with the Compliance Assistance Oversight Plan to 117 facilities; many facilities required multiple visits during the period: (Ongoing activity)
 - 1. Perchloroethylene dry cleaning facilities (72 visits).
 - 2. Auto-body repair shops (59 visits).
- iv. Continued the amending of Section 36 of 7 DE Admin. Code 1124 to provide the requirements for the decommissioning of Stage II vapor recovery controls at gasoline dispensing facilities. (Est. completion – 4Q15)
- v. Began working on the adoption of the Federal requirements under 40 CFR Part 63 Subpart VVVVVV applicable to area source chemical manufacturing facilities into 7 DE Admin. Code 1138. (Est. completion – 2016)

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

1. Implement appropriate actions to reduce the harm from exposure to air toxics

b. Significant Current Activities - Continued

- vi. Provided pertinent information (i.e. regulatory, permitting, compliance assistance, costs, etc.) associated with dry cleaning facilities, auto-body shops, and gasoline delivery vessels for future inclusion on DNREC's Small Business Assistance Program website. (Est. completion – 2015)
- vii. Began working on a public outreach through the development and implementation of a mobile source/air quality-themed educational program in September, which will target high school students who participate in the 2015 Envirothon. (Est. completion – 2Q15)

c. Pending

- i. The adoption of the Federal requirements under 40 CFR Part 63 Subpart CCCCCC applicable to area source Stage I gasoline dispensing facilities is on hold pending completion of a regulatory action associated with the decommissioning of Stage II vapor recovery systems at gasoline dispensing facilities.

2. Evaluate the effectiveness of the actions taken to reduce harm from exposure to air toxics

a. Key Accomplishments

- i. Completed 12 months of monitoring of air toxics at the Wilmington [carbonyls, metals, and volatile HAPs] and the Delaware City [volatile HAPs] monitoring stations. These air toxics monitoring data enhance our knowledge of the changes in the ambient concentrations of air toxics over time. (Ongoing activity)
- ii. Completed semi-monthly QA/QC performance audits of the Division of Motor Vehicle's motor vehicle technicians and emissions testing equipment during this period and submitted the annual inspection and maintenance (I/M) report to the EPA on July 31.
- iii. Completed the development and began implementation of the data gathering and compliance determination procedures using DELJIS information to demonstrate the effectiveness of the I/M enforcement program under the mobile source State Implementation Plan and incorporated the results in the annual I/M report submitted to the EPA on July 31.
- iv. Completed a thorough review of the three internal standard operating procedures (SOPs) for issuing Tank Management permits and revised the SOPs to . . .
 - 1. Establish smoother paper flow through the approval process.
 - 2. Ensure timely processing.
 - 3. Maintain the integrity of the permit database.
- v. Completed 20 compliance evaluations at perchloroethylene dry cleaning facilities (~40% of known facilities).
- vi. Completed 4 compliance evaluations at auto-body repair shops (~6% of known facilities).
- vii. Completed 118 inspections at regulated gasoline dispensing facilities (~35% of known facilities).

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

2. Evaluate the effectiveness of the actions taken to reduce harm from exposure to air toxics

a. Key Accomplishments - Continued

- viii. Tracked 362 vapor recovery system tests at 302 regulated gasoline dispensing facilities (~89% of known facilities); multiple testing was required at some of the facilities.
- ix. Completed 21 perceptible leak tests on gasoline delivery vessels (~3% of known delivery vessels). All gasoline delivery vessels were found to be in compliance.
- x. Completed 440 site inspections at asbestos demolition sites; many of these sites required multiple visits.

b. Significant Current Activities

- i. Completed eight full compliance evaluations [of 14 scheduled for 2014-5] at facilities subject to major source HAP standards (i.e., MACT and residual risk standards). These facilities were found to be in compliance with the major source HAP requirements. (Est. completion – 9/15)
- ii. Completed nine full compliance evaluations [of 30 scheduled for 2014-5] at facilities subject to area source HAP standards (i.e., GACT standards). The sources were found to be in compliance with the area source HAP requirements. (Est. completion – 9/15)
- iii. Continued to provide compliance assistance to gasoline delivery vessel fleet owners in meeting annual vapor-tightness testing and permitting requirements. (Ongoing activity)
- iv. Completed the annual “remote sensing” monitoring in accordance with the ozone State Implementation Plan in December; the results and final report to be issued next year. (Est. completion – 3/15)

3. Identify options for reducing air toxics in the environment

a. Key Accomplishments

- i. Submitted grant application in April and was awarded a 2014 Diesel Emissions Reduction Act (DERA) grant; Memorandum of Understanding (MOU) was signed during 4Q14.
- ii. Worked with MARAMA on the submittal of an application for a competitive EPA grants to fund projects to reduce diesel emissions at the Port of Wilmington; the grant was awarded in 4Q14.
- iii. Completed review and submitted comments to the EPA on their newly proposed residual risk and technology review (RTR) standards applicable to petroleum refineries (40 CFR Part 63 Subparts CC and UUU) on October 27.
- iv. Worked with the Ozone Transport Commission on the development of a model rule for aftermarket catalytic converters, which was approved by the commission on June 10.

b. Significant Current Activities

- i. Continued to promote transit oriented design through review and providing comment on Land Use applications (PLUS, QOL, and TAC submittals). (Ongoing activity)

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

3. Identify options for reducing air toxics in the environment

b. Significant Current Activities - Continued

- ii. Continued to provide Tank Management support for DAQ's regulatory activity for decommissioning Stage II systems at gasoline dispensing facility through participation in the regulatory workgroup and vendor review meetings, providing comments on suitability of various control technologies, and the review of regulatory language. (Est. completion – 4Q15)
- iii. Began the development of goals for several of DAQ's priority initiatives (i.e. Climate, Communities, Mobile Sources, etc.); newly identified air toxics-related activities from these initiatives will be incorporated into the future ATSPs. (Ongoing activity)
- iv. Continued working with other organizations to identify air quality problems, develop strategies, and implement Delaware solutions, as follows:
 - 1. Participated on the Claymont Coalition meeting, when needed. (Ongoing activity)
 - 2. Participated on internal, local, and NACAA air toxics committees. (Ongoing activity)
 - 3. Participated at monthly WILMAPCO meetings for New Castle County and biannual workgroup meetings for Kent and Sussex Counties providing the Department's priorities on funding projects, while continuing to look for projects where CMAQ funding could be used. (Ongoing activity)
 - 4. Participated on Mid Atlantic Diesel Collaborative (MADC) projects through conference calls and MADC-sponsored webinars. (Ongoing activity)
 - 5. Participated on internal, local, regional, and national greenhouse gas initiatives, such as the Regional Greenhouse Gas Initiative, etc. (Ongoing activity)
 - 6. Supported the Transportation & Climate Initiative. (Ongoing activity)
- v. Began review of the EPA's newly re-proposed residual risk and technology review (RTR) standards applicable to secondary aluminum production facilities (40 CFR Part 63 Subpart RRR) on December 18. (Est. completion - 1Q15)
- vi. Began working with the Small Business Ombudsman to identify new targets for the outreach program on the proper removal and disposal of asbestos. (Ongoing activity)

4. Build greater understanding of ambient air toxics in the environment

a. Key Accomplishments

- i. Completed 12 months of monitoring of air toxics at the Wilmington [carbonyls, metals, and volatile HAPs] and the Delaware City [volatile HAPs] monitoring stations. All validated results were submitted to the EPA. (Ongoing activity)
- ii. Completed the installation of a field gas chromatograph in the Moveable Monitoring Platform in March for the measurement of BTEX concentrations at locations other than the existing stationary monitoring stations.

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

4. Build greater understanding of ambient air toxics in the environment

a. Key Accomplishments – Continued

- iii. Identified grant funding to install a vehicle wrap with DAQ's branded message designs on the exterior of the Moveable Monitoring Platform.
- iv. Completed a major branding activity by presenting the following two DAQ themes in the messaging on the vehicle wrap of the Moveable Monitoring Platform.
 - 1. "Monitoring the Air Because We Care".
 - 2. "Blue Skies Now and Tomorrow".

b. Significant Current Activities

- i. Commenced a volatile air toxics monitoring project at the Delaware City Refinery using the sorbent tube technology during July. (Exp. Completion – 2015)
- ii. Commenced monitoring air toxics concentrations on November 7 in a community potentially impacted by the emissions from diesel locomotives delivering crude oil in tank cars to the Delaware City Refinery using the Moveable Monitoring Platform. (Exp. Completion – 2015)

5. Identify the potential harm from exposure to air toxics

a. Key Accomplishments

- i. Performed risk screenings prior to issuance of new and revised air permits during 2014. All screen results were below the threshold for conducting more sophisticated risk assessment, such as AERMOD. (Ongoing activity)

b. Significant Current Activities

- i. Mapped out initial drafts of the incremental benzene cancer risk between two control technologies on December 2, using estimated emission for gasoline dispensing facilities, the EPA's AERMOD dispersion model, and the Division of Public Health risk assessment procedures. (Exp. Completion – 4Q15)
- ii. Began tracking the EPA's 2011 National Air Toxics Assessment (NATA) development; facilitated correction of stationary source emission errors in the EPA's version 1 modeling results. (Exp. Completion – 4Q15)

6. Gather information related to air toxics sources

a. Key Accomplishments

- i. Completed submittals of the Underground Storage Tanks (UST) Semiannual Activities Report, which included gasoline dispensing facilities, to EPA in April and October.
- ii. Completed modifications to Delaware Environmental Navigator (DEN) database to allow out-of-state addressing of sources (i.e. gasoline delivery vessels, etc.).

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

6. Gather information related to air toxics sources

b. Significant Current Activities

- i. Continued to incorporate new notifications and to maintain existing active sites in the Delaware Online Asbestos Notification System (DOANS). (Ongoing activity)
- ii. Commenced a new program to collect and quantify VOC emissions from Delaware auto-body repair shops; annual compiled emission data will be used to validate or correct the currently established area source emissions factors.
 1. Completed development of auto-body repair shop VOC emissions database.
 2. Collection and analysis of 2014 VOC emissions data was underway at year end. (Exp. Completion – 1Q15)

7. Continue to grow the ongoing program to address the risks from exposure to air toxics

a. Key Accomplishments

- i. Issued the Year-End Status Report for DAQ's 2013 Air Toxics Strategic Plan on March 17. This report provided year-end status of each air toxics-related activity undertaken during the year. It also summarized the key accomplishments of 2013, as well as, identifying the significant 2013 activities continuing into 2014.
- ii. Issued the Mid-Year Status Report for DAQ's 2014 Air Toxics Strategic Plan on September 19. This report summarized the key accomplishments between January 1 and June 30. It also identified the significant ongoing activities continuing into the second half of 2014.
- iii. Developed and issued DAQ's 2015 Air Toxics Strategic Plan on December 30. The new plan identified planned activities between 2015 and 2019 to identify and mitigate unacceptable risk.
- iv. Continued to build the monitoring infrastructure needed to implement DAQ's risk-based process to mitigate unacceptable air toxics impacts with the installation of a field gas chromatograph in the Moveable Monitoring Platform for the measurement of BTEX concentrations at locations other than the existing stationary monitoring stations. The Moveable Monitoring Platform commenced its initial air toxics special monitoring project on Nov. 7, see activity 4.b.ii. above.

2014 Air Toxics Strategic Plan – Year-end Status – Summary Report

7. Continue to grow the ongoing program to address the risks from exposure to air toxics

b. Significant Current Activities

- i. Continued to actively participate on NACAA's committees focusing on air toxics, emissions inventory, mobile sources, modeling, monitoring, and outreach. (Ongoing activity)
- ii. Continued to actively participate in regional and national programs, including the following, to identify air quality problems related to greenhouse gases, criteria pollutants, and air toxics, to develop strategies, and to identify Delaware solutions. (Ongoing activities)
 1. Regional Greenhouse Gas Initiative.
 2. Transportation & Climate Initiative
 3. North America 2050 Partnership
 4. Clean Cities/States Program (Alternative Fuels)
 5. Clean Fuel Standard
 6. NESCAUM Low Emission Vehicle Workgroup
 7. Mid-Atlantic Regional Air Management Association

8. Air toxics resources development

a. Key Accomplishments

- i. Attended 2014 EPA Modelers Workshop over May 19 to 22 in Salt Lake City.

b. Significant Current Activities

- i. Continued to implement a cooperative arrangement with DNREC's Groundwater Discharge Section to share results and information gathered during each program's inspections of auto-body repair shops. (Ongoing activity)